

The Prepared Practitioner

January 2010, Bridging Educational Theory and Practice

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Literature Circles

This issue's theme is "Science and Literacy." The concept of literacy is used in all sorts of ways—exemplified by the frequent discussions about scientific literacy within our discipline. In this column, though, I will use the traditional focus of this term: reading ability. Reading is arguably the most important skill that schools provide students. At the same time, many science teachers lack the desire or the ability to help students read better. This is something I struggle with myself—so I turned to my colleague, William Straits, who has written several articles about using literature to help students better understand the nature of science.

When it comes to literacy and science teaching, the first question many of us ask is "Why?" As science teachers, why should we have to teach reading? Straits points out that high school science courses typically introduce over a thousand vocabulary terms. Students learn about most of these terms through their textbooks—which are often written in a style that is foreign to students—so a teacher who can help students understand how to read their textbooks can also help them understand science ideas.

Straits also notes that many of us want students to experience scientific inquiry, and that this process requires language arts skills. Science is a social enterprise, which means communication is inevitable. Doing science requires reading and writing skills.

Many wonderful books and stories exist that help bring science alive for students—if they are able to read and understand them. Using literature to help students better understand the nature of science often involves some combination of historical vignettes, case studies, or readers' theater. Straits (2007) discusses a different approach for using historical nonfiction in the classroom: the literature circle—a kind of structured, school version of a book club or discussion group that is designed to help students make personal connections with science.

To use literature circles, students are placed into cooperative groups and each member is assigned a role. Group members read the same selection, but different groups may read different selections. Roles rotate from class to class, and eventually, groups share highlights of their work with their peers and teacher.

Straits (2007) provides a long list of possible roles for students in literature circles. A few examples include

- ◆ Literary Luminaries, who select a few special sections or passages for discussion;
- ◆ Illustrators, who make some sort of drawing related to the reading;
- ◆ Word Wizards, who keep an eye out for puzzling or unfamiliar words;
- ◆ Everyday Life Connectors, who try to connect the reading's events and characters with everyday life;
- ◆ Historians, who research what else was happening in the world during the selection's time period; and
- ◆ Science Skeptics, who compare the way science is done in the book with criteria discussed in class, such as controlling variables, avoiding bias, and having lots of good data upon which to base conclusions.

Teachers can incorporate student roles that best fit their instructional goals. These roles provide starting points for discussions—helping students understand what they are reading and make connections with the nature of science and their own experiences. However, students are not limited to these talking points. Current events, personal experiences, and other subjects help enrich personal connections. At the discussion's conclusion, students change roles and decide (or are assigned) their next reading. Books and stories end with group presentations, which are a fun way to synthesize what was read.

The literature circle approach might be particularly appropriate to try during a unit with few possibilities for quality hands-on lab activities. Readers looking for more information and tips for using literature circles should consult the articles referenced in this column (Daniels 1994; Straits 2007).

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References

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